

CLAIMS

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is as follows:

- 1 1. Apparatus to determine prices of products priced by weight comprising:
2 a camera for detecting and identifying a product by type;
3 means for determining a volume of the product based on image
4 information from the camera;
5 a database of lookup tables of densities of a plurality of products; and
6 a computer terminal which receives product type and volume of the
7 product information and accesses the database to determine a density for the
8 product, the computer terminal computing a weight of the product as a
9 function of volume and density of the product and then computing a price of
10 the product as a function of price/weight ratio.
- 1 2. The apparatus recited in claim 1, wherein the apparatus is part of a checkout
2 station in a retail store.
- 1 3. The apparatus recited in claim 2, further comprising a display connected to
2 the computer which displays the calculated price of the product.
- 1 4. The apparatus recited in claim 3, wherein the computer generates a running
2 total of prices for a plurality of products as part of a single transaction and
3 displays the running total on the display.
- 1 5. The apparatus recited in claim 3, further comprising a connected to the
2 computer which prints the running total.

1 6. The apparatus recited in claim 1, wherein the computer terminal categorizes
2 the product within one of a plurality of weight ranges, the price of the product
3 being a function of the weight ranges.

1 7. A method of determining a product weight and calculating price comprising
2 the steps of:
3 detecting a product with a camera;
4 identifying the product by type;
5 determining a volume of the product from an image of the product;
6 accessing a database of densities of a plurality of products and
7 determining a density for the detected and identified product;
8 calculating a weight of the product as a function of volume and density
9 of the product; and
10 calculating a price of the product as a function of the calculated weight
11 and price/weight ratio.

1 8. The method recited in claim 7, further comprising the step of displaying the
2 calculated price of the product.

1 9. The method recited in claim 8, further comprising the step of generating a
2 running total of prices for a plurality of products as part of a single transaction.

1 10. The method recited in claim 9, further comprising the step of printing the
2 running total upon completing of the transaction.

1 11. The method recited in claim 7, further comprising the step of categorizing
2 the product within one of a plurality of weight ranges, the price of the product

3 being a function of the weight ranges.